


Multimedia Web Development As Video Viewing Media With Php In Local Network

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ARTICLEINFO	ABSTRACT
<p>Article history: Received Dec 24, 2019 Revised Jan 12, 2020 Accepted Jan 28, 2020</p> <hr/> <p>Keywords: multimedia web; information Systems; ISO 25010 standard.</p>	<p>Exploring content collections is one of the things that internet cafe users do that is highly expected by managers. Activities carried out to select collections that are interesting and entertaining or even needed by users. This research was conducted with the aim of developing a web-based software to help explore the available film collections, (2) ensuring the quality of the software developed in accordance with the ISO 25010 standard on aspects of functional suitability, usability, and reliability. The research methodology used is Research and Development (R&D) with a waterfall development model. This development model has stages starting from analysis, design, implementation and research testing. The results of this study are: (1) an information system to assist the browsing of film collections for internet café users. (2) the system has met the software quality standard according to the ISO 25010 standard in the functional suitability aspect of 100% (very good), usability aspect of 75.97% (good), and 100% reliability aspect.</p> <p><i>This is an open access article under the CC BY-NC license.</i></p> 

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1. INTRODUCTION

Currently, humans are required to improve their mastery of technology to keep pace with technological developments. Technology can simplify human life and work, and has become a part of everyday life that is very difficult to separate (Ngafifi, 2014). One example is the development of a multimedia website that provides entertainment facilities in the form of music or video, but web development as above is not widely applied to local networks. (Warsita, 2011).

For example, a local network that is very often used by the community is a network in an internet cafe. Odom explains that networking is a combination of hardware, software, and cabling, making it possible for a wide variety of applications computing devices or computers communicate with each other (Achmadianto, 2018). From the above definition, an internet cafe has met the criteria to have a network where several computers (hardware) that have Windows (software) installed are connected to each other using a cable so that they can communicate. (RAHARJO, Susilo, & Al Haris, 2016).

Internet cafes which are now mushrooming in Indonesia are now turning to providers of multimedia files that are easy for users to access. Files that have been provided by the internet cafe manager can be copied by users without downloading files from the internet, so many choose

to come to internet cafes to search for music, movies, or games. Thus, the function of the internet cafe, which used to be a place to access the internet for users who do not have internet access, has now changed its function to become a provider of multimedia content. Even though the function has changed, the internet cafe still doesn't leave its old function to access websites on the internet (ARIANY, 2018).

From the search in the field, several internet cafes have provided special applications to explore the collections provided. However, the available features are still not easy for users and still do not meet the standards of user needs. Applications that are used often only show advertisements and movie locations without displaying movie descriptions or posters (Nurhardian, Ferdiansyah, & Dwiyatno, 2015).

2. METHOD

2.1 Research methods

This research was conducted using the Research and Development (R&D) method. The resulting product is researched, designed, manufactured and scientifically tested using research and development methods (Ambarwati, 2016). (REVELATION, 2018) revealed that research and development methods are research methods that are carried out intentionally, systematically, aimed / directed to find, formulate, improve, develop, produce, test the effectiveness of products, models, methods / strategies / methods, services, certain procedures that are superior, effective, efficient, productive, and meaningful. This study uses the Waterfall development model. is a waterfall model development flow which consists of 4 steps, namely:

- a. Software requirements analysis. Information is collected from the software intensively and focused. Users need to document and review requirements for the software or system.
- b. design. This process consists of four main attributes of software, namely data structure, software architecture, interface representation, and procedural details. This process is a representation of the requirements as outlined in the software design. Furthermore, this design can be implemented using a programming language into a program. This process needs to be documented
- c. Code generation. This process is a step to change the design that has been made into a form that is understood by the machine. This step is code generation so that the design is machine readable. Programming will be easier if the design process is carried out and made in detail.
- d. Test. Program testing is done after the code is finished. Testing focuses on the internal logic of the software. Existing parts must also be confirmed to have been tested. The purpose of this test is to minimize errors made by the program so that the output generated from the input is as needed.

2.2 Method of collecting data

The data collection techniques that the researchers did in the study were as follows:

- a. Interview
According to Budiyo (2003:52), the interview method is also called (interview) is a way of collecting data through conversations between researchers (assigned people) and research subjects or respondents or data sources. This activity was carried out to find information about electronic sales at PT Bintang Multi Sarana Palembang. The data used for data mining calculations is electronic sales data from 2015 to 2017.
- b. Questionnaire/Questionnaire
Giving respondents a set of questions or written statements that must be answered is one of the data collection techniques in the form of a questionnaire or questionnaire (Sugiyono, 2015b: 199). In this study, testing the functionality suitability and usability aspects using the questionnaire/questionnaire method. Aspects of functionality suitability assessed using a questionnaire that requires only "YES" or "NO" answers. This is because the functionality suitability aspect consists of the functions, inputs and outputs of the developed system. The usability aspect is tested using the USE Questionnaire.
- c. Observation

According to Jogiyanto (2008:89) observation is a technique or approach to obtain primary data by observing directly the data object. The approach is taken by observing directly the events in the electronic sales system at PT Bintang Multi Sarana Palembang.

3. RESULTS AND DISCUSSIONS

3.1 Analysis

The system to be built is a web application using the PHP, HTML, CSS, and MySQL programming languages. This application was built with the aim of making it easier for users to choose, search and watch videos provided by the internet cafe manager. This application was created with the aim of the main user, namely internet café users who come to search or watch available movies.

a. Functionability Aspect Test

Questionnaires or questionnaires are used to conduct tests and collect data on the functionality suitability aspect. Questionnaire that used in the form of a checklist or questions and statements that only require confirmation answers. The contents of the questionnaire are in the form of system functions that have been determined from the results of the needs analysis. The questionnaire was given to three experts working in the field of web development and development. Table 8 is the result of functionality suitability testing that has been carried out with three experts.

Table 1.
Functionality Suitability Aspect Test Results

No	Function	Results	
		Success	Fail
A.	Administrator		
1	Log in	3	0
2	Log out	3	0
3	View a list of administrators	3	0
4	Change your own data	3	0
5	View a list of movie categories	3	0
6	View movie category details	3	0
7	Add movie category	3	0
8	Delete movie category	3	0
9	Changing movie category details	3	0
10	Updating category content	3	0
11	View category access statistics	3	0
12	Add a target folder for a category (more from one target folder)	3	0
13	Reduce target folder for categories	3	0
14	View the entire list of movies	3	0
15	View a list of movies by category	3	0
16	Add activity log (automatically when make a change)	3	0
17	View activity log	3	0
18	Differentiating admin by giving level 1 and 99	3	0
19	Adding a new administrator (admin level 99)	3	0
20	Removing an administrator (admin level 99)	3	0
21	Change other administrator data (admin level 99)	3	0
22	Delete activity log (admin level 99)	3	0

From the results of the tests that have been carried out, the percentage of the feasibility of the functionality suitability can be calculated using the following formula:

$$\text{eligibility percentage (\%)} = \frac{\text{score earned}}{\text{manual score}} \times 100\%$$

According to the interpretation of Ghafur (2017: 97), the value of the functionality suitability is said to be very good if it ranges from 81% - 100%. The results of the calculations that have been carried out show a value of 100% for the feasibility of the functionality suitability of the information system developed so that the software meets the criteria very well.

b. Reliability Aspect Test

WAPT 10.0 software is used to test the reliability aspect. This software performs stress testing by simulating active users and continuous connections. Reliability testing is carried out using a ramp-up scenario or giving the number of users in stages with a maximum number of simulated users of 20 people in 10 minutes. The parameters taken in this test are sessions, pages, and hits. The results of the tests carried out using the WAPT 10.0 software are shown and explained as follows:

Table 1.
Reliability Aspect Test Results

Page	SuccessfulSession	FiledSession	SuccessfulPage	FiledPage	SuccessfulHit	FiledHit
Login Page	3607	0	7234	0	18095	0
Dashboard Page	21422	0	21422	0	42848	0
PagesAdd Admin	19019	0	19019	0	38038	0
Admin List Page	14071	0	14082	0	42235	0
Category List Page	17753	0	17753	0	35506	0
PagesAdd Category	19308	0	19308	0	38610	0
Movie Title List Page	3665	0	3665	0	14720	0
Movie Details Page	4987	0	4987	0	4987	0
Total	103832	0	107470	0	235039	0

From the values in Table 9, it can be known further the total failures and successes that occurred during testing. Table 10 shows the total success and failure of the results obtained:

Table 1.
Total Success and Failure of Reliability Aspect Test Results

Metric	Success	Fail	Total Case
Sessions	103832	0	103832
Pages	107470	0	107470
Hits	235039	0	235039
Total	446341	0	446341

The reliability value of the information system built can be known by calculating the data in Table 10 using the Nelson model formula in Maurya (2014: 6)

3.2 Discussion

The software that has been successfully developed is in the form of a system that contains information or also known as an information system. As explained by Stair & Reynolds (2003: 8), a system is a set of components or elements that are interconnected to achieve a goal. The developed system has various components such as admin-only pages, detail pages, and databases. These components work together where data is entered in a special admin page which is then stored in the database. When users use this system, the stored data will be recalled by the detail page and displayed in the form of information that has been compiled to make it easier for users to understand it.

Implementation of the design made using the programming language PHP, HTML, and CSS. By using PHP, the system developed is server side so that it increases security. To manage this

system, a special admin page is provided that functions to add, change and delete data on the server from anywhere. HTM is used to build the basic display on this system while CSS is used to beautify the appearance that has been built using HTML. The display results as attached in Appendix 7 are a combination of HTML and bootstrap which is a framework with CSS programming language.

The results of software quality testing are divided into three aspects. The functional suitability aspect gets 100% results which is the maximum result from system testing. This means that the functions specified in the design stage have been implemented and are fully operational. The reliability aspect gets a result of 1 with a scale of 1, which means that this aspect gets the maximum value from the tests carried out. The value of 1 was obtained because there were no failed session, failed pages and failed hits when tested using WAPT. The usability aspect got a score of 75.97% (good). This value can still be increased by paying more attention to user needs and ease of use by users. However, this value is sufficient for usability criteria.

4. CONCLUSION

Research on a multimedia web information system as a video display media with PHP in a local network produces a product in the form of a web application that is built using a bootstrap framework. This application has a function to display a collection of films that are on the Internet internet cafe and displays details of available movies and provides recommendations based on the number of movie accesses as well as random recommendations. Features in this application include being able to view posters and movie titles, having a search feature, being able to view movie data, and being able to play movies. This application has three user levels namely main admin, low level admin and general user. The difference between the two user levels is that the main admin can add admins, delete admins, and replace existing admin account levels. While the general ability of the two levels of users is to be able to add film categories, change film categories, delete film categories, update the contents of film categories. General users only have the ability to view the movie collection without changing anything. This application is also recognized by users in making it easier to access and search for film collections provided by the manager. A multimedia web information system as a video display media with PHP in a local network has been tested for feasibility using the ISO 25010 standard in three test criteria. These criteria are aspects of functionality suitability with 100% (very good) results.

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